

Certificate of Analysis

www.tocris.com

Product Name: Omeprazole

Catalog No.: 2583

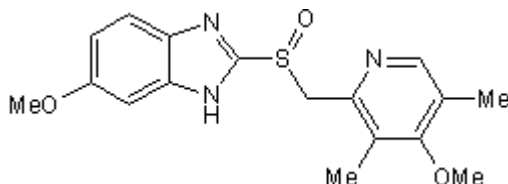
Batch No.: 1

CAS Number: 73590-58-6

IUPAC Name: 5-Methoxy-2-[[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-1*H*-benzimidazole

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₇H₁₉N₃O₃S
Batch Molecular Weight: 345.42
Physical Appearance: White solid
Solubility: 1eq. HCl to 50 mM
DMSO to 100 mM
ethanol to 25 mM
Storage: Desiccate at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows >99.9% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	59.11	5.54	12.16
Found	58.88	5.49	12.01

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

Product Name: Omeprazole

Catalog No.: 2583

Batch No.: 1

CAS Number: 73590-58-6

IUPAC Name: 5-Methoxy-2-[[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-1H-benzimidazole

Description:

H⁺,K⁺-ATPase inhibitor (IC₅₀ = 5.8 μM) that displays antisecretory and antiulcer activity. Inhibits gastric acid secretion (IC₅₀ = 0.16 μM for histamine-induced acid formation) and reduces gastric lesion formation induced by a variety of ulcerative stimuli. Antibacterial against *Helicobacter pylori* in vitro. Also inhibits CYP2C19, CYP2C9 and CYP3A (K_i values are 3.1, 40.1 and 84.4 μM respectively) and blocks swelling-dependent chloride channels (IC₅₀swell).

Physical and Chemical Properties:

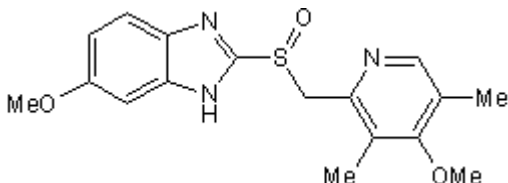
Batch Molecular Formula: C₁₇H₁₉N₃O₃S

Batch Molecular Weight: 345.42

Physical Appearance: White solid

Minimum Purity: >99%

Batch Molecular Structure:



References:

Sato *et al* (1989) Antisecretory and antiulcer activities of a novel proton pump inhibitor AG-1749 in dogs and rats. *J.Pharmacol.Exp.Ther.* **248** 806. PMID: 2537418.

Richardson *et al* (1998) Proton pump inhibitors. *Drugs* **56** 307. PMID: 9777309.

Schmarda *et al* (2000) The gastric H,K-ATPase blocker lansoprazole is an inhibitor of chloride channels. *Br.J.Pharmacol.* **129** 598. PMID: 10711360.

Storage: Desiccate at +4°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

1eq. HCl to 50 mM

DMSO to 100 mM

ethanol to 25 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

bio-techne.com

info@bio-techne.com

techsupport@bio-techne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-techne.com

Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors

Tel: +1 612 379 2956